## REMARKS

Claims 81, 85, 95, 99, 110, 121, 125, 134, 138 and 148 have been canceled by the subject amendment without prejudice or disclaimer of the subject matter thereof.

Claims 80, 82, 83, 84, 90, 93, 94, 96, 97, 98, 101, 104, 107, 108, 111, 112, 116, 120, 122, 123, 124, 126, 129, 132, 133, 135, 136, 137, 139, 142, 145, 146, 149, 150 and 153 have been amended.

Claims 80 – 156 are present in the subject application.

In the Office Action dated November 20, 2003, the Examiner has objected to claims 83, 97, 112, 123, 136 and 150, has rejected claims 94, 100 – 109, 113 – 119, 133, 139 – 147 and 151 – 156 under 35 U.S.C. §102(e) and has rejected claims 80 – 82, 84 – 93, 95 – 96, 98 – 99, 110 – 111, 120 – 122, 124 – 132, 134 – 135, 137 – 138 and 148 – 149 under 35 U.S.C. §103(a). Favorable reconsideration of the subject application is respectfully requested in view of the following remarks.

Initially, the Examiner has objected to claims 83, 97, 112, 123, 136 and 150 as being dependent upon a rejected base claim, but indicated that these claims would be allowable if rewritten in independent form. Accordingly, claims 83, 97, 112, 123, 136 and 150 have been rewritten in independent form and are considered to be in condition for allowance.

The Examiner has rejected claims 94, 100 – 109, 113 – 119, 133, 139 – 147 and 151 – 156 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,890,906 (Macri et al.). Briefly, the Macri et al. patent discloses a method of instruction and simulated training and competitive play or entertainment in an activity that couples cognitive and motor functions, in particular, the playing of the game of hockey. The apparatus includes a computer used to view and to control images of hockey players on a computer screen. An image of a hockey player controlled by the user is

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juxtaposed to or superimposed upon the image of an instructive, ideal or master hockey player(s). The user manipulates the controlled image of a hockey player in an effort to approximate the movements of the instructive or ideal player via an input device such as a keyboard, joystick, or virtual reality device. The apparatus also includes means by which the user's performance in approximating the instructive or ideal player may be measured. The user can also control an image of a hockey player on the computer screen so that the image engages in performing offensive and defensive drills in opposition to an ideal or another opponent or team.

In contrast, the present invention is directed toward a firearm training system including a training firearm that emits a laser signal in response to actuation of the firearm. A laser-detecting target detects the exact location the laser signal hits the target. The target is connected to a computer which reports laser hit information and keeps track of a sequence of laser hits fired by the competitor or trainee. The computer can be linked via a communications network to similar firearm training systems to enable competition between shooters at different geographic locations.

The Examiner takes the position that the Macri et al. patent discloses all the features within these claims. This rejection is respectfully traversed since the Macri et al. patent does not disclose, teach or suggest the features recited in independent claims 94, 108, 133 and 146 of measuring performance of a physical activity by a subject or participant as discussed below. However, in order to expedite prosecution of the subject application, independent claims 94, 108, 133 and 146 have been amended and recite the features of measuring performance of physical operation of a firearm by a subject or participant by identifying impact locations on a target and evaluating the measured performance (or identified target impact locations) to produce information associated with performance results and a level of skill of the subject or participant with respect to the firearm

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operation.

The Macri et al. patent does not disclose, teach or suggest these features. Rather, the Macri et al. patent discloses an apparatus for instruction and simulated training and competitive play or entertainment in an activity. The apparatus includes a computer used to view and to control images of hockey players on a computer screen (e.g., See Abstract). An instructive or ideal computer generated image displays the preferred style, technique, posture, procedure, skills, drills, positions, maneuvers, tactics, strategies or plays of an activity, preferably hockey, that calls for using cognitive and motor functions. The user manipulates a user controllable adopted computer generated image on another portion of the screen to cause the adopted image to simulate or proximate the preferred actions represented by the instructive or ideal image (e.g., See Column 2, lines 1 – 19; Column 5, lines 2 – 5 and 22 – 24). The Macri et al. patent further discloses that the system enables users to engage in simulated repetition and/or competition geared to either learning or entertainment within the economy of space used for a computer monitor and keyboard without actual imitative movement of an instructive figure and without the requirement to use actual tools, implements or equipment (e.g., See Column 2, line 62 to Column 3, line 3). Thus, the Macri et al. patent discloses a user manipulating a computer generated image performing an activity (preferably hockey) in accordance with the motions of an instructional or ideal computer generated image, as opposed to measuring the physical performance of the activity by the subject as recited in the independent claims. In addition, the Macri et al. patent does not disclose, teach or suggest measuring performance of physical firearm operation by the subject or participant by identifying impact locations on the target or, for that matter, evaluating the measured performance (or identified target impact locations) to produce information associated with performance results and a level of skill of the subject or participant with

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respect to the firearm operation as recited in the independent claims. Since the Macri et al. patent does not disclose, teach or suggest the features recited in independent claims 94, 108, 133 and 146 as discussed above, these claims are considered to be in condition for allowance.

Claims 100 – 107, 109, 113 – 119, 139 – 145, 147 and 151 – 156 depend, either directly or indirectly, from independent claims 94, 108, 133 or 146 and, therefore, include all the limitations of their parent claims. Claims 101, 104, 107, 116, 139, 142, 145 and 153 have been amended for consistency with their amended parent claims. The dependent claims are considered to be in condition for allowance for substantially the same reasons discussed above in relation to their parent claims and for further limitations recited in these claims.

The Examiner has rejected claims 80 – 81, 84 – 93, 95, 98 – 99, 110, 120 – 121, 124 – 132, 134, 137 – 138 and 148 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,890,906 (Macri et al.) in view of Patent Document No. GB 2 141 810 (Kellet et al.). Since claims 81, 85, 95, 99, 110, 121, 125, 134, 138 and 148 have been canceled, the rejection is moot with respect to these claims. Briefly, the Macri et al. patent discloses an apparatus for instruction and simulated training as described above. The Kellet et al. document discloses an apparatus for training a gunner including a viewing device which fits over the eyepieces of a gun sight and of a device for displaying range information from a rangefinder. The viewing device has a prismatic image combiner which combines the images from both eyepieces to be viewed by a video camera linked to the viewing device via a flexible optical fibre coupling. The image viewed by the camera together with pictorial information representing the operation of the gunner's controls and the movement of the gun is transmitted by a transmitter to a receiver at a remote location where an instructor is able to view on a display precisely the same scene as viewed by the gunner together with additional

information indicating how the gunner is operating the gun controls and how the gun is moving. A recorder is provided to enable playback and analysis of the training exercise.

In contrast, the present invention is directed toward a firearm training system as described above.

The Examiner takes the position that the Macri et al. patent discloses all the limitations within independent claims 80 and 120 except for the feature of the result information being provided to an instructor. The Examiner further alleges that the Kellet et al. document discloses this feature and that it would have been obvious to combine the Macri et al. patent and Kellet et al. document to attain the claimed invention.

This rejection is respectfully traversed since the Macri et al. patent does not disclose, teach or suggest measuring performance of a physical activity by a subject as discussed above. However, in order to expedite prosecution of the subject application, independent claims 80 and 120 have been amended and recite the features of measuring performance of physical operation of a firearm by a subject by identifying impact locations on a target and evaluating the measured performance (or identified target impact locations) to produce information associated with performance results and a level of physical skill of the subject with respect to the firearm operation.

As discussed above, the Macri et al. patent does not disclose, teach or suggest these features. The Kellet et al. document does not compensate for the deficiencies of the Macri et al. patent and similarly does not disclose, teach or suggest these features. Rather, the Kellet et al. document discloses an apparatus for training a gunner comprising a viewing device by which the gunner may view a target through a gun sight and a video camera linked to the viewing device by a flexible coupling enabling the camera to view the target through the gun sight. The output of the video

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camera is preferably transmitted via an antenna either to an instructor at a remote location and/or to an instructor positioned on or in a vehicle (e.g., See Page 1, lines 25 – 35). A receiver at a remote location has a display on which is displayed the same image as seen by the gunner and consisting of range information and the view through the sight. The display further includes a pictorial representation of the rate of change of a gunner's demand in azimuth and elevation and the rate of change of the angular position of the gun in azimuth and elevation. The output of the receiver is recorded to allow analysis of the training exercise after it has been completed (e.g., See Page 2, lines 56 – 79). Thus, the Kellet et al. document discloses transmitting the scene viewed by the gunner and information related to gunner manipulation of the gun to an instructor. There is no disclosure, teaching or suggestion of measuring physical operation of a firearm by a subject by identifying impact locations on a target or, for that matter, evaluating the measured performance (or identified target impact locations) to produce information associated with performance results and a level of physical skill of the subject with respect to the firearm operation as recited in the claims. Since the Macri et al. patent and Kellet et al. document do not disclose, teach or suggest, either alone or in combination, the features recited in independent claims 80 and 120 as discussed above, these claims are considered to be in condition for allowance.

Claims 84, 86 – 93, 98, 124, 126 – 132 and 137 depend, either directly or indirectly, from independent claims 80, 94, 120 or 133 and, therefore, include all the limitations of their parent claims. Claims 84, 90, 93, 98, 124, 126, 129, 132 and 137 have been amended for consistency with their amended parent claims. The dependent claims are considered to be in condition for allowance for substantially the same reasons discussed above in relation to their parent claims and for further limitations recited in these claims.

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The Examiner has rejected claims 82, 96, 111, 122, 135 and 149 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,890,906 (Macri et al.) in view of Patent Document No. GB 2 141 810 (Kellet et al.) and further in view of U.S. Patent No. 5,529,310 (Hazard et al.). Briefly, the Macri et al. patent discloses an apparatus for instructing and simulated training as described above, while the Kellet et al. document discloses an apparatus for training a gunner as described above. The Hazard et al. patent discloses a hand-held multi-function target presentation control system with interchangeable operator control modules for communicating with at least one wireless target control module. The operator control module has a user interface for selectively controlling a plurality of stations, with each station having at least one target launch machine, for inputting and tracking a plurality of shooters, and for inputting a target launch sequence and a score for each shooter.

In contrast, the present invention is directed toward a firearm training system as described above.

The Examiner takes the position that the combination of the Macri et al. patent and Kellet et al. document discloses all the claimed subject matter except for the firearm activity being measured with a laser-detecting target that detects impact locations of a laser beam emitted from a laser transmitting firearm. The Examiner further alleges that it is well known to utilize a laser transmitter and laser-detecting target to analyze firearm training performance where the Hazard et al. patent discloses this feature. The Examiner takes the further position that it would have been obvious to combine the Hazard et al. patent with the combination of the Macri et al. patent and Kellet et al. document to attain the claimed invention.

This rejection is respectfully traversed. Initially, claims 82, 96, 111, 122, 135 and 149

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respectively depend, either directly or indirectly, from independent claims 80, 94, 108, 120, 133 and 146 and, therefore, include all the limitations of their parent claims. Claims 82, 96, 111, 122, 135 and 149 have been amended for consistency with their amended parent claims. As discussed above, the combination of the Macri et al. patent and Kellet et al. document does not disclose, teach or suggest the features recited in the independent claims. The Hazard et al. patent does not compensate for the deficiencies of the combination of the Macri et al. patent and Kellet et al. document, but rather, discloses a target machine control module that activates one or more target launch machines for launching targets (clay type targets or targets with hit sensors) according to commands entered in the operator control module (e.g., See Column 2, lines 7 –12 and 48 – 51; Column 3, line 67 to Column 4, line 2; Column 5, lines 6 – 11, 35 – 37, 53 – 54 and 64 – 67; and Column 6, lines 18 – 20 and 48 - 50). Since the Macri et al. patent, Kellet et al. document and Hazard et al. patent do not disclose, teach or suggest, either alone or in combination, the features recited in claims 82, 96, 111, 122, 135 and 149 as discussed above, these claims are considered to be in condition for allowance.

In addition to the foregoing, it would not be obvious to combine the teachings of the Macri et al. patent, Kellet et al. document and Hazard et al. patent to attain the claimed invention. In particular, the Macri et al. patent discloses a system for instructing and simulating training as described above, while the Kellet et al. document discloses an apparatus for training a gunner as described above. The Hazard et al. patent discloses a hand-held multifunction target presentation control system as described above.
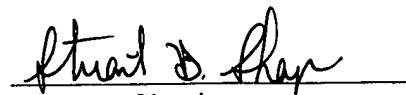
The Macri et al. patent discloses a system enabling a user to manipulate a computer generated image to perform an activity in accordance with an ideal or instructional computer generated image as described above. The Macri et al. patent further discloses that the users of the apparatus engage in

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simulated repetition and/or competition within the space used for a computer monitor and keyboard and without the requirements for actual imitative movement of an instructive figure and without the use of tools, implements or equipment. Thus, the Macri et al. patent is directed toward a system for providing virtual training for an activity (without the use of any activity equipment) by user manipulation of a computer generated image, and is not concerned with and **expressly teaches away from** measuring physical performance of an activity by a subject and, for that matter, measuring performance of physical operation of a firearm by a subject or participant by identifying impact locations on a target as recited in the claims.

Since the Kellet et al. document discloses a system that provides a remote receiver with gunner controls to a gun servo during gun operation and consequent gun movement, there is apparently no reason or motivation to combine the virtual training system of the Macri et al. patent with the Kellet et al. system. In fact, the Macri et al. patent expressly teaches away from providing information relating to performance of a physical activity by a user (e.g., the operation of the gun in the Kellet et al. document) as discussed above. Further, the Hazard et al. patent is directed toward a hand-held control for a target launcher which seemingly has no relation to the systems disclosed in the Macri et al. patent and Kellet et al. document. Thus, there is no apparent reason or motivation to combine the teachings of the Macri et al. patent, Kellet et al. document and Hazard et al. patent absent prohibited hindsight derived from Applicants' own disclosure. Accordingly, the proposed combinations of the Macri et al. patent, Kellet et al. document and Hazard et al. patent do not render the claimed invention obvious.

The application, having been shown to overcome issues raised in the Office Action, is considered to be in condition for allowance and a Notice of Allowance is earnestly solicited.

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